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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,779	11/19/1999	SU CHIN CHANG	13237-2495	7712
27366	7590	01/12/2006	EXAMINER	
WESTMAN CHAMPLIN (MICROSOFT CORPORATION) SUITE 1400 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			SPOONER, LAMONT M	
		ART UNIT	PAPER NUMBER	
		2654		

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/443,779	CHANG ET AL.
Examiner	Art Unit	
Lamont M. Spooner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 5/5/05.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-17,20-23,32 and 33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-17,20-23,32 and 33 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 19 November 1999 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date .

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_ .

## DETAILED ACTION

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Response to Arguments***

2. Claims 24-31 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/26/05.
3. Applicant's arguments filed 5/5/04 have been fully considered but they are not persuasive.

In response to applicant's arguments, claims 1-9 do not recite the limitations as argued "Loatman et al. does not appear to teach or suggest that either rules which were unsuccessfully ... are displayed to the user." In fact, as cited, any alternate rule, concerning claim 1, other than the rules used in generating a constituent ..., displayed as a menu item is sufficient for this limitation. Claims 10-17, 20-23, 32 and 33, Loatman teaches the above argued subject matter, (Fig. 9b-his z as the bug point, and his variables "FO933" as alternate rules, also in fig. 19 his verification of the parse of "dirty"- those rules were not applied at all, thus interpreted as not successfully applied, once chosen they may be applied, successfully or unsuccessfully, C.45.lines 21-68).

In response to applicant's arguments regarding Hicken et al., "Hicken et al. has nothing to do with applying grammar rules to parse an input text to obtain a parse tree."

The Examiner cannot concur on several levels. Hicken provides a lexical analyzer/parser (Fig. 1 item 11), and further displays alternate grammar rules in the Examiners best interpretation of the claim 10 limitation "the menu items including an alternate grammar rules display item which, when activated, displays alternate grammar rules comprising grammar rules not successfully applied in generating the parse tree (C.4.lines 66-his parser, conventionally and inherently requires rules in parsing an input text, C.6.lines 34-44-his rule violations and "any violations found .. reported to user as error messages, and C.12.lines 12-17). Furthermore, the Examiner notes, applicant states, "Hicken et al. have nothing to do with rules that are used to generate a parse tree, but are only rules that are examined, given the already generated parse tree, ..." this argument remedied above, but also wherein the Examiner finds Hicken to be similar to the claim language, (i.e. claim 10), wherein an already generated parse tree, has it's rules, implied successful, and unsuccessful displayed, more specifically, the Examiner fails to see a difference. Furthermore, applicant's arguments with respect to claims 1-17, 20-23, 32 and 33 have been considered but are moot in view of the new ground(s) of rejection

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, lines 13-18, "the menu items including an alternate grammar rules display item which, when activated, displays alternate grammar rules comprising grammar rules not successfully applied in generating the parse tree." is unclear, as the Examiner is unable to determine whether the applicant intends whether the rules were not successfully applied, wherein there was an attempt to apply the rules, however, the attempt to apply the rules failed, or the rules were successfully applied, however were not successful in generating a parse tree. The successful application regarding the rules in generating the parse tree remains vague and unclear. For purpose of examination the Examiner interprets the alternate grammar rules to comprise grammar rules that did not successfully generate the parse tree.

In claim 32, lines 1-3, "the alternate rules comprise rules unsuccessfully applied to the selected connecting point in generating the constituent" is unclear and confusing. In the first unclear aspect; were the rules unable to be applied to the connecting point in a failed attempt to apply the rules, or where the rules successfully applied to the selected connecting point? Yet failed to generate a constituent? In the second unclear aspect, claim 1 calls for rules in generating a constituent, and alternate rules, other than the rules in generating a constituent, however, unsuccessful applied rules are the same as the rules used in generating a constituent, they are simply unsuccessful rules. More specifically, the constituent has not necessarily been generated at any point in the claim, based on a possible negative determination, claim 1, lines 8 and 9, "determining

whether a constituent was formed at said selected connecting point;" Therefore, unsuccessful applied rules are the same as the rules used in generating a constituent, which implies that the claim calls for alternate rules other than other rules which could be the alternate rules... (itself), wherein one is unable to decipher between successful and unsuccessful rules, because a constituent has never been generated.

***Claim Objections***

6. Claims 1 and 32 are objected to because of the following informalities: Claims 1 and 32 are objected to as possibly being incomplete for omitting steps or elements, such omission amounting to a gap between the steps, or missing element. See MPEP § 2172.01. More specifically:

In claim 1, after "other than the rules used in generating a constituent at the selected connecting point, *"if the determination is positive"* or *"if a constituent was formed/generated at said selected connecting point"*, or similarly put.

In claim 32, "Generating a constituent (with successful rules, if possible); and determining rules applied to a selected connecting point to be unsuccessful in generating a constituent, if applied to a selected connecting point, and failing to generate the constituent."

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-17, 20-23, 32 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Loatman et al (Loatman, US 4,914,590).

As per **claims 1, 7, 8**, Loatman et al teach a method for analyzing and debugging natural language parses, comprising (figures 8A-16B):

“Displaying a parse tree for a textual input, the parse tree being generated based on rules and comprising at least one connecting point having two children” (figure 8a, col. 36, lines 2 1-55, the complex sentence “Reagan warned... the strait” is parsed and the parse tree shown in figure 8a);

“Receiving control input selecting one of said connecting points as a selected connecting point” (col. 36, line 56 to col. 37, line 25, a graphic debugging tool that is displayed allows the user to interact with the output of the parse and to select a node (connecting point) of the parse tree); col. 17, line 1 to col. 22, line 56, his system browser);

“Determining whether a constituent was formed at said connecting point” (col. 37, lines 7-25, the leaf nodes represent the individual words of input which have been morphologically analyzed); and

“displaying a plurality of display items proximate to said selected connecting point” (col. 37, lines 14-25, the user has bugged the node which hold the parse of the clause and a menu of that clause is displayed).

“the display items including alternate rules, other than the rules used in generating a constituent at the selected connecting point” (Fig 9B-his FO933 variables

are interpreted to include alternate rules, also Fig. 19-his verification of the parse for "dirty" interpreted also as alternate rules, C.45.lines 65-68-his return to parse, C.45.lines 20-64-his menu).

As per **claim 2**, Loatman et al teach "receiving control input one of said plurality of menu..." (figures 10a-10b, the user interact with three window, col. 37, lines 30-54, col. 17, line 1 to col. 22, line 56, his system browser in particular section 2- 4. 1.3, col. 2 1, lines 37-48 that recites pressing the right button, bring s a menu of graph editing options where a link / node can be deleted);

"In response to receiving said control input for deleting said constituent , deleting said constituent" (col. 21, lines 35-47, a node is deleted accordingly).

As per **claim 3**, Loatman et al teach receiving control input for selecting one of said plurality of display items for deleting said parse tree" (col. 22, lines 48-57, the DeleteLink Fn prompts for the From and To nodes from which delete the link and the graph (parse tree)).

"In response...deleting constituent formed at each connecting point in said parse tree" (col. 22, lines 48-59).

As per **claim 4**, Loatman et al teach "receiving control input selecting ..displaying information regarding said children of said selected connecting point" (figures 43A through 43D, col. 31, line 64 to col. 32, line 50, particularly col. 32, lines 18-24);

"Displaying information regarding said children of said selected connecting point" (figures 43A through 43D, col. 31, line 64 to col. 32, line 50, particularly col. 32, line 18-

24, his system browser can display all the parse showing the links (nodes) of parent and children).

As per **claim 5**, Loatman et al teach displaying a first plurality of menu ... identifying a grammar rule applied at said selected point to form constituent" (col. 38, line 35 to col. 40, line 2 his grammar development example).

As per **claim 6**, Loatman et al further teach wherein said control input selecting one of said connecting points as a selected connecting point comprises: "

Receiving input from an input placing a pointer of a user interface proximate to one of said connecting point" (col. 17, lines 1-50, the user selects any displayed node to be operated on with a browser windows that acts as menus); and

"receiving input representing an enabled state for the control of the input device" (col. 17 , lines 1-40),.

As per **claim 9** , Loatman et al teach determining whether a constituent was formed at said selected connecting point comprises determining whether a rule was successfully applied at said selected connecting ..." (Col. 37, line 65 to col. 38, , line 20).

**Claim 10** recites the limitations of claim 1 (see rejection of claim 1 above), and further recites the menu items including an alternate grammar rule display items which when activated , displays alternate grammar rules comprising grammar rules not successfully applied in generating the parse tree (fig. 19 his verification of the parse of dirty-those rules were not applied at all, thus interpreted as not successfully applied, once chosen they may be applied, successfully or unsuccessfully).

As per **claim 11**, Loatman et al teach receiving control selecting one of said plurality of menu items (col. 17, line 1 to col. 22, line 57, his system browser wherein when a node is selected, menus are displayed relate to examining and modifying things, provide database search and edit the window's graph);

"in response to receiving user input...displaying a second plurality of menus item proximate to said plurality of menu items" (col. 17, lines 52-61, a menu of the object slot is displayed , then when a slot is selected a menu of its facets will pop up).

As per claims **12- 16**, Loatman et al teach receiving control input selecting, activating the alternate grammar rules display item... connecting point; (figure 9b, Fig. 19),, and

"displaying a first group of rules comprising all of the rules that may be applied at said selected connecting point of said constituents of said connecting point" (figure 9b, col. 11, line 10 to col. 12, line 12).

As per claims **17, 20-23 and 32-33**, Loatman et al teach receiving control input activating the alternate grammar rules display items for displaying a group of alternate rules applied at said selected connecting point that did not successfully form a constituent at said selected connecting point and displaying of alternate rules (figure 9b- his z as the bug point, Fig. 19-his "dirty not recognized" and verification as successful and unsuccessful determination, col. 45, lines 21-68).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Freiling et al. (US 4,816,994) teaches interactive rule based parsing, including displaying alternate rules, other than the rules used in generating a parse.
- Yokogawa (US 5,225,981) teaches user interactive parsing and debugging natural language input.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M. Spooner whose telephone number is 571/272-7613. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571/272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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